5.10 Hazards and Hazardous Materials

5.10 HAZARDS AND HAZARDOUS MATERIALS

This section identifies the potential for the proposed project to expose the public to hazards, hazardous materials, or risk of upset that may be related to existing conditions or new hazards created as a result of the proposed project. Where significant impacts are identified, mitigation measures are provided to reduce these impacts to the extent feasible. This Section is based on an asbestos sampling and clean up report (prepared by the Los Angeles Department of Water and Power [DWP] in 1987), a Phase II Environmental Site Assessment (prepared by Parsons in 2000), a Supplement Soil Investigation Report (prepared by Tetra Tech, Inc. in 2001), and a Phase II Environmental Site Assessment (prepared by Dudek in 2011); refer to Appendix 11.9, *Hazardous Materials Data*.

For this EIR, the term "hazardous material" is defined as any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety, or to the environment, if released into the workplace or environment.[1] "Hazardous waste," a subset of hazardous material, is material that is to be discharged, discarded, recycled, and/or reprocessed.

5.10.1 EXISTING SETTING

The project site is situated within a residential and recreational area of the City, on portions of five Assessor's Parcel Number (APNs) (APNs 043-171-02, -172-07 [portions], -172-08, -172-12, and -172-13). The project site consists of vacant disturbed land, except for one residential structure located within the northwestern portion of the site. Currently, the project site undergoes routine maintenance activities (i.e., soil tilling and weed removal). The western portion of the project site consists of the San Gabriel River and associated bike trail (San Gabriel River Bike Trail). Approximately 0.2 acres of land within the northwestern portion of the project site consist of a residence and vacant portions of a commercial facility. On-site topography generally slopes south and west, toward the Pacific Ocean and San Gabriel River, respectively. The site is sloped as a result of past site demolition activities associated with the former on-site DWP power plant facilities and operations.

HISTORICAL ON-SITE USES

The project site has a long history of use as a power generating station, dating back to 1925, when Los Angeles Gas & Electric constructed a fuel oil-fired generating station on portions of the site. In 1936, Los Angeles Gas & Electric sold the facility to the City of Los Angeles. The City of Los Angeles operated the power plant for several years before decommissioning the facility in 1966. The power plant was demolished in 1967. In the mid-1980's, the site underwent other demolition activities and environmental cleanup and remediation and then was re-graded.

On-Site Hazardous Materials Investigations

Previous hazardous materials investigations have occurred at the project site in an effort to determine whether or not hazardous materials are present as a result of the former power plant.

[1] California Health and Safety Code, Chapter 6.5, Article 2, December 2006.

The following information is summarized from an asbestos sampling and clean up report (prepared by DPW in 1987), a Phase II Environmental Site Assessment (prepared by Parsons in 2000), a Supplement Soil Investigation Report (prepared by Tetra Tech, Inc. in 2001), and a Phase II Environmental Site Assessment (prepared by Dudek in 2011); refer to Appendix 11.9.

Structural Asbestos

Asbestos is a strong, incombustible, and corrosion resistant material, which was used in many commercial products since prior to the 1940s and up until the early 1970s. If inhaled, asbestos fibers can result in serious health problems. The California Division of Occupational Safety and Health (Cal/OSHA) asbestos construction standard (Title 8, CCR, Section 1259) defines asbestos containing material (ACM) as material containing more than one percent asbestos. Asbestos Containing Construction Material (ACCM) is defined as any manufactured construction material which contains more than one tenth of 1 percent asbestos by weight.

Asbestos was detected in the soil in several areas of the site in 1987. More than 3,500 cubic yards of asbestos-contaminated soil was removed from the site in 1987. The Orange County Health Care Agency (HCA) issued a no further action letter for the asbestos contamination in 1987. Additional asbestos sampling was conducted in 2000. Asbestos was detected in three samples, but none of the samples contained asbestos at greater than 1 percent. Tetra Tech collected 62 soil samples in 2001. All samples were below the detection limit of 0.1 percent asbestos, except for one sample, which contained less than 1 percent asbestos. Tetra Tech calculated human health impacts and determined the asbestos cancer risk demonstrated that development would not likely increase the risk level to unacceptable.

Based on Dudek's 2011 sampling, none of the samples reported detections of asbestos over the detection limit. Dudek collected fifteen soil samples, all of which contained less than 1 percent asbestos. Based on the Cal/OHSA definition, none of the samples are classified as ACM. In all, more than 415 samples were collected and analyzed for asbestos at the project site. Since asbestos remediation at the project site occurred in 1987, none of the on-site asbestos soil samples detected asbestos greater than 1 percent. Thus, based on the available hazardous materials investigations conducted for the project site, asbestos at the project site is not anticipated to exceed thresholds for residential use. It should be noted that the residential thresholds would apply to the entire project site, including areas proposed for passive recreational use (e.g., a tot lot).

Organic Compounds

Total petroleum hydrocarbons (TPH) is a term used to describe a large family of several hundred chemical compounds that originally come from crude oil. Crude oil is used to make petroleum products, which can contaminate the environment. As there are so many different chemicals in crude oil and in other petroleum products, it is not practical to measure each one separately. However, it is useful to measure the total amount of TPH at a site. Some chemicals that may be found in TPH are hexane, jet fuels, mineral oils, benzene, toluene, xylenes, naphthalene, and fluorene, as well as other petroleum products and gasoline components. However, it is likely that samples of TPH will contain only some, or a mixture, of these chemicals. TPH typically does not have screening level or action level associated with human health risk. However, concentrations of the individual chemicals can be compared to published screening level, such as the California

Environmental Protection Agency (CalEPA) Region IX Regional Screening Levels (formerly Preliminary Remediation Goals [PRGs]).

Total petroleum hydrocarbon (TPH) was detected in three soil samples at a concentration greater than 1,000 milligrams per kilogram (mg/kg). TPH was detected in 32 samples at a concentration greater than 100 mg/kg. The TPH samples were analyzed by U.S. Environmental Protection Agency (EPA) Method 418.1, which does not provide the carbon range of the petroleum compounds detected. Tetra Tech also collected and analyzed soil samples for TPH-gas and TPH-diesel, which were analyzed by EPA Method 8015B. None of these samples contained TPH-gas or TPH-diesel above the detection limit.

TPH also includes organic compounds, including but not limited to, semi volatile organic compounds (SVOCs) and volatile organic compounds (VOCs). Other organic compounds that may be present at the project site include dichlorodiphenyltrichloroethane (DDT), and polychlorinated biphenyls (PCBs).

Based on available hazardous materials data for the project site, no VOCs were detected in the site soil samples. VOCs, DDT, and PCBs were detected during Tetra Tech's 2001 supplemental soil investigation. However, all analytical results (including VOCs, DDT, and PCBs) were well below their respective residential PRGs. Tetra Tech concluded that there was no apparent need for soil remediation concerning organic compounds. Based on Dudek's 2011 sampling, no VOCs were detected in the soil vapor samples collected at the project site. Further, no VOCs were detected in the groundwater samples collected. Thus, organic compounds (including those that comprise TPH) at the project site are not anticipated to exceed residential regulatory thresholds.

PAHs

According to the Agency for Toxic Substances and Disease Registry, Polycyclic aromatic hydrocarbons (PAHs) are a group of over 100 different chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances like tobacco or charbroiled meat. PAHs are usually found as a mixture containing two or more of these compounds, such as soot. Some PAHs are manufactured. These pure PAHs usually exist as colorless, white, or pale yellow-green solids. PAHs are found in coal tar, crude oil, creosote, and roofing tar, but a few are used in medicines or to make dyes, plastics, and pesticides. Health effects on human organ systems include, but may not be limited to, the skin, liver, and immune system. Long-term health effects of exposure to PAHs may include cataracts, kidney and liver damage, and jaundice. Repeated skin contact to the PAH naphthalene can result in redness and inflammation of the skin. Breathing or swallowing large amounts of naphthalene can cause the breakdown of red blood cells. PAHs are also reasonably anticipated to be human carcinogens.

Detections of PAHs, including carcinogenic PAHs (CPAHs) were detected on-site by Dudek in 2011. CPAHs are typically present in soils in older industrial areas. Dudek reviewed the Department of Toxic Substance Control's (DTSC's) guidance document *Use of the Northern and Southern California Polynuclear Aromatic Hydrocarbon (PAH) Studies in the Manufactured Gas Plant Site Cleanup Process*. This advisory document describes methodology useful in determining whether soil PAH concentrations are representative of ambient PAH levels and provides guidance on ambient PAH concentrations specific to southern California. PAHs are the byproduct of a number of anthropogenic and natural processes including fossil fuel combustion, oil spraying, various industrial

processes, fires, and volcanic activity. PAH concentrations not attributed to a specified source are frequently observed in soils and represent ambient concentrations.

The DTSC has compiled and analyzed 185 soil samples from 22 sites throughout Southern California and produced a data set representative of ambient background PAH soil characteristics. PAH concentrations in soil at the project site were within the ambient background PAH concentrations. Naphthalene, acenaphthene, and pyrene were detected in one groundwater sample at 0.56 micrograms per liter (ug/L), 0.30 ug/L and 0.23 ug/L respectively. These concentrations were compared to groundwater standards published by the San Francisco Bay Regional Water Quality Control Board (RWQCB) and EPA. The detected concentrations were below both the RWQCB's and EPA's groundwater standards. The remaining four groundwater samples all reported concentrations of PAHs below the detection limit. Thus, the detected PAHs on-site appear to be similar to the background levels for regional levels in the County and are anticipated to be below regulatory thresholds for residential use.

Arsenic/Metals

Human exposure to arsenic can cause both short and long term health effects. Short or acute effects can occur within hours or days of exposure. Long or chronic effects occur over many years. Long term exposure to arsenic has been linked to cancer of the bladder, lungs, skin, kidneys, nasal passages, liver, and prostate. Short term exposure to high doses of arsenic can cause other adverse health effects. Arsenic occurs naturally in rocks and soil, water, air, and plants and animals. It can be further released into the environment through natural activities such as volcanic action, erosion of rocks and forest fires, or through human actions. Approximately 90 percent of industrial arsenic in the U.S. is currently used as a wood preservative, but arsenic is also used in paints, dyes, metals, drugs, soaps and semi-conductors. High arsenic levels can also come from certain fertilizers and animal feeding operations.

According to the DTSC, arsenic may be identified as a chemical of concern based on comparisons to naturally occurring background concentrations. Once arsenic has been identified as a chemical of concern, a standard approach is developed to determine if remedial action is warranted and, if so, how to develop appropriate cleanup goals.[2] Based on the Phase II Environmental Site Assessment (prepared by Parsons in 2000), arsenic was detected at concentrations up to 20 mg/kg. The arsenic was determined to likely be background, based on background data from the nearby Seal Beach Naval Weapons Station where concentrations of arsenic have been reported up to approximately 26 mg/kg. Thus, the detected arsenic on-site appears to be similar to the background levels for the regional levels in the County. Therefore, potential arsenic within on-site soils is anticipated to be similar to other soils located throughout the City.

The 2001 supplemental soil investigation analyzed 23 soil samples in accordance with the Title 22 metals analysis. All sample concentrations were below the typical screening criteria (10 times the soluble threshold limit for soluble metals and the total threshold limit concentrations for non-soluble metals).

[2] Department of Toxic Substances Control, *Arsenic Strategies*, January 16, 2009.

On-Site Groundwater Conditions

Heptachlor was used as an insecticide; however, nearly all registered uses of heptachlor have been canceled. Very limited information is available on the health effects of heptachlor in humans. Acute (short-term) inhalation exposure to heptachlor may result in nervous system effects, with oral studies showing gastrointestinal effects. Animal studies have reported effects on the liver and central nervous system from oral exposure. Chronic (long-term) inhalation and oral exposure by humans may be associated with neurological effects including irritability, salivation, and dizziness, while oral exposure may result in effects on the blood. Human studies are inconclusive regarding heptachlor and cancer. Animal oral studies have reported liver tumors. EPA has classified heptachlor as a Group B2, probable human carcinogen.

Based on the Phase II Environmental Site Assessment (prepared by Parsons in 2000), heptachlor was detected in all four groundwater samples with a maximum detected concentration of 4.46 ug/L; however, it was not detected in any of the soil samples at the project site. Therefore, it is likely that the heptachlor did not originate on-site. Based on these investigations, heptachlor detected in groundwater is not anticipated to result in soil or vapor concentrations that exceed residential screening levels.

During Dudek's 2011 sampling, depth to groundwater was observed to be between 8.4 and 10.7 feet below ground surface (bgs). No VOCs were detected at concentrations greater than their respective reporting limits in the groundwater samples. PAHs (naphthalene, acenaphthene, and pyrene) were detected slightly above the reporting limit. These concentrations were compared to screening levels set forth by the San Francisco Bay RWQCB and EPA. The concentrations of PAHs detected in the groundwater sample did not exceed these screening levels. Further, the groundwater encountered on-site during Dudek's subsurface investigation (from 8.40 to 10.7 feet bgs) is assumed to be not suitable for drinking water supply due to proximity to the ocean.

Soil Vapor Samples

Fifteen soil vapor samples were analyzed by Dudek for VOCs using the EPA Method 8260B on September 1, 2011. Soil vapor sampling was conducted in accordance with the DTSC Advisory - Active Soil Gas Investigation document, 2010. The soil vapor samples were analyzed using residential screening levels. None of the soil vapor samples contained VOCs above residential screening levels. Soil vapor sample results were compared to residential land use California Human Health Screening Levels (CHHSLs) for soil vapor collected at five feet bgs. All VOCs were below the CHHSLs provided by the CalEPA. Thus, any on-site soil vapors are anticipated to be below regulatory thresholds for residential development at the project site.

Conclusions

Based on the hazardous materials data for the soil, soil vapor, and groundwater conditions at the project site, it appears that all potentially hazardous materials that have been investigated on-site are below the regulatory thresholds for residential development.

5.10.2 REGULATORY SETTING

FEDERAL AND STATE

According to the EPA, a "hazardous" waste is defined as one "which because of its quantity, concentrations, or physiochemical or infectious properties, may either increase mortality or produce irreversible or incapacitating illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed" (U.S. Public Health and Welfare Code Section 6903). Special handling and management are required for materials and wastes that exhibit hazardous properties. Treatment, storage, transport, and disposal of these materials are highly regulated at both the Federal and State levels. Compliance with Federal and State hazardous materials laws and regulations minimizes the potential risks to the public and the environment presented by these potential hazards. These laws and regulations include, but are not limited to, the following:

- Resources Conservation and Recovery Act (RCRA) – Hazardous waste management;
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – Cleanup of contamination;
- Superfund Amendment and Reauthorization Act (SARA) – Cleanup of contamination; and
- Hazardous Materials Transportation Act (HMTA) – Safe transport of hazardous materials.

These laws provide the "cradle to grave" regulation of hazardous wastes. Businesses, institutions, and other entities that generate hazardous waste are required to identify and track their hazardous waste from the point of generation until it is recycled, reused, or disposed of. The primary responsibility for implementing RCRA is assigned to the EPA, although individual states are encouraged to seek authorization to implement some or all RCRA provisions.

The EPA and the DTSC have developed and continue to update lists of hazardous wastes subject to regulation. In addition to the EPA and DTSC, the Santa Ana Region (Region 8) RWQCB, is the enforcing agency for the protection and restoration of water resources, including remediation of unauthorized releases of hazardous substances in soil and groundwater. Other State agencies involved in hazardous materials management include the Office of Emergency Services (OES), California Department of Transportation (Caltrans), California Highway Patrol (CHP), California Air Resources Board (CARB), and CalRecycle. California hazardous materials management laws include, but are not limited to, the following:

- Hazardous Materials Management Act – Business plan reporting;
- Hazardous Substance Act – Cleanup of contamination;
- Hazardous Waste Control Act – Hazardous waste management; and
- Safe Drinking Water and Toxic Enforcement Act of 1986 – Releases of and exposure to carcinogenic chemicals.

Department of Toxic Substances Control

In 1992, the responsibility for implementation of RCRA was given to DTSC. The DTSC is also responsible for implementing and enforcing California's own hazardous waste laws, which are known collectively as the Hazardous Waste Control Law. Although similar to RCRA, the California Hazardous Waste Control Law and its associated regulations define hazardous waste more broadly and regulate a larger number of chemicals. Hazardous wastes regulated by California, but not by EPA, are called "non-RCRA hazardous wastes."

State Water Resources Control Board

Brownfields are underutilized properties where reuse is hindered by the actual or suspected presence of pollution or contamination. The goals of the State Water Resources Control Board's (SWRCB) Brownfield Program are to:

- Expedite and facilitate site cleanups and closures for Brownfields sites to support reuse of those sites;
- Preserve open space and greenfields;
- Protect groundwater and surface water resources, safeguard public health, and promote environmental justice; and
- Streamline site assessment, clean up, monitoring, and closure requirements and procedures within the various SWRCB site cleanup programs.

Site clean up responsibilities for brownfields primarily reside within four main programs at the SWRCB: the Underground Storage Tank Program, the Site Cleanup Program, the Department of Defense Program and the Land Disposal Program. These SWRCB cleanup programs are charged with ensuring sites are remediated to protect the State of California's surface and groundwater and return it to beneficial use.

California Air Resources Board

One of CARB's major goals is to protect the public from exposure to toxic air contaminants. The California Air Toxics Program establishes the process for the identification and control of toxic air contaminants and includes provisions to make the public aware of significant toxic exposures and for reducing risk.

The Toxic Air Contaminant Identification and Control Act (AB 1807, Tanner 1983) created California's program to reduce exposure to air toxics. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly 1987) supplements the AB 1807 program by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks.

Under AB 1807, CARB is required to use certain criteria in the prioritization for the identification and control of air toxics. In selecting substances for review, the CARB must consider criteria relating to "the risk of harm to public health, amount or potential amount of emissions, manner of, and exposure to, usage of the substance in California, persistence in the atmosphere, and ambient concentrations in the community." AB 1807 also requires CARB to use available information

gathered from the AB 2588 program to include in the prioritization of compounds. This report includes available information on each of the above factors required under the mandates of the AB 1807 program. AB 2588 air toxics "Hot Spots" program requires facilities to report their air toxics emissions, ascertain health risks, and to notify nearby residents of significant risks. In September 1992, the "Hot Spots" Act was amended by Senate Bill 1731 which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

Accidental Release Prevention Law

The State's Accidental Release Prevention Law provides for consistency with Federal laws (i.e., the Emergency Preparedness and Community Right-to-Know Act and the Clean Air Act) regarding accidental chemical releases and allows local oversight of both the State and Federal programs. State and Federal laws are similar in their requirements; however, the California threshold planning quantities for regulated substances are lower than the Federal quantities. Local agencies may set lower reporting thresholds or add additional chemicals to the program. The Accidental Release Prevention Law is implemented by the Certified Unified Program Agencies (CUPAs) and requires that any business, where the maximum quantity of a regulated substance exceeds the specified threshold quantity, register with the responsible CUPA as a manager of regulated substances and prepare a Risk Management Plan. A Risk Management Plan must contain an offsite consequence analysis, a five-year accident history, an accident prevention program, an emergency response program, and a certification of the truth and accuracy of the submitted information. Businesses submit their plans to the CUPA, which makes the plans available to emergency response personnel. The Business Plan must identify the type of business, location, emergency contacts, emergency procedures, mitigation plans, and chemical inventory at each location.

Transportation of Hazardous Materials/Wastes

Transportation of hazardous materials/wastes is regulated by California Code of Regulations (CCR) Title 26. The United States Department of Transportation (DOT) is the primary regulatory authority for the interstate transport of hazardous materials. The DOT establishes regulations for safe handling procedures (i.e., packaging, marking, labeling and routing). The CHP and Caltrans enforce Federal and State regulations and respond to hazardous materials transportation emergencies. Emergency responses are coordinated as necessary between Federal, State and local governmental authorities and private persons through a State mandated Emergency Management Plan.

Worker and Workplace Hazardous Materials Safety

Occupational safety standards exist to minimize worker safety risks from both physical and chemical hazards in the workplace. The Cal/OSHA is responsible for developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA requires many businesses to prepare Injury and Illness Prevention Plans and Chemical Hygiene Plans. The Hazard Communication Standard requires that workers be informed of the hazards associated with the materials they handle.

REGIONAL

Santa Ana Regional Water Quality Control Board

The Santa Ana RWQCB is the enforcing agency for the protection and restoration of water resources, including remediation of unauthorized releases of hazardous substances in soil and groundwater. The Underground Storage Tank (UST) Section directs environmental cleanup activities at leaking UST sites. Such sites include active and inactive gasoline stations, agricultural sites, brownfield redevelopment sites, airports, bulk petrochemical storage terminals, pipeline facilities, and various chemical and industrial facilities. The Site Cleanup Section oversees activities at non-UST sites where soil or groundwater contamination have occurred. Many of these sites are former industrial facilities and dry cleaners, where chlorinated solvents were spilled, or have leaked into the soil or groundwater.

South Coast Air Quality Management District

The South Coast Air Quality Management District (SCAQMD) works with CARB and is responsible for developing and implementing rules and regulations regarding air toxics on a local level. The SCAQMD establishes permitting requirements, inspects emission sources, and enforces measures through educational programs and/or fines.

COUNTY OF ORANGE

Orange County Health Care Agency

Since April 1988, the SWRCB has contracted with the County of Orange to provide regulatory oversight for cleanup of leaking underground storage tanks (USTs) under the Local Oversight Program (LOP) contract. The Orange County Health Care Agency, serving as the County's LOP, is responsible for the following:

- Confirming a release;
- Identifying and notifying Responsible Parties (RPs);
- Reviewing and approving preliminary site assessment work plans to determine the type and extent of soil and groundwater contamination;
- Overseeing assessment activities;
- Reviewing assessment reports, quarterly reports, feasibility studies, risk appraisals, and corrective action plans;
- Issuing cleanup directives to the RPs;
- Overseeing cleanup operations;
- Approving and certifying cleanup operations; and
- Completing all records.

The HCA, Environmental Health Division, is designated as the CUPA for the County of Orange by the State Secretary for Environmental Protection. The CUPA is the local administrative agency that coordinates the regulation of hazardous materials and hazardous wastes in Orange County through the following six programs:

- Hazardous Waste (HW);
- Underground Storage Tank (UST);
- Aboveground Petroleum Storage Tank (APST);
- Hazardous Materials Disclosure (HMD);
- Business Emergency Plan (BEP); and
- California Accidental Release Prevention (CalARP).

Orange County Fire Authority

The Orange County Fire Authority (OCFA) has joined in partnership with the HCA as a Participating Agency (PA). The OCFA administers the HMD and BEP programs, which are overseen by the HCA. Chapter 6.95 of Division 20 of the California Health and Safety Code, Section 11022 of Title 42 of the United States Code (1989), and local laws contain the minimum requirements for hazardous material inventory reporting and data management. These regulations require businesses within this jurisdiction to complete a chemical inventory to disclose hazardous materials stored, used, or handled on-site. This disclosure information assists emergency responders in planning for and handling emergencies involving hazardous materials. The main program objective is to safeguard the lives of emergency responders, the public, and to minimize property loss. The California Health and Safety Code also requires a BEP. The intent of the BEP is to assist in mitigating a release or threatened release of a hazardous material, and to minimize any potential harm or damage to human health or the environment.

Orange County Waste and Recycling

Leftover household products that contain corrosive, toxic, ignitable, or reactive ingredients are considered to be "household hazardous waste". Products, such as paints, cleaners, oils, batteries, and pesticides that contain potentially hazardous ingredients require special care when you dispose of them. Improper disposal of household hazardous wastes can include pouring them down the drain, on the ground, into storm sewers, or in some cases putting them out with the trash. The dangers of such disposal methods might not be immediately obvious, but improper disposal of these wastes can pollute the environment and pose a threat to human health. Household hazardous waste and e-waste can be collected at a County Household Hazardous Waste Collection Center. The Huntington Beach Household Hazardous Waste Collection Center (located at 17121 Nichols Street-Gate 6, Huntington Beach) serves the project site.

CITY OF SEAL BEACH

City of Seal Beach General Plan

Topic 2 of the Safety Element of the General Plan discusses hazardous materials related issues within the City. Applicable hazardous materials-related Policies include the following:

2D. Encourage and support the use of alternatives to toxic materials in the home and yard.

2H. Support the continuation of the Orange County Fire Authority's hazardous materials disclosure program. Ensure annual inspections of businesses that generate or use

hazardous materials, and identify and monitor any historical hazardous materials sites within the City for public health and safety issues.

5.10.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

CEQA SIGNIFICANCE CRITERIA

The environmental analysis in this section is patterned after the Initial Study Checklist recommended by Appendix G of the CEQA Guidelines, as amended, and used by the City of Seal Beach in its environmental review process, and is contained in Appendix 11.1 of the EIR. The Initial Study includes questions relating to hazards and hazardous materials. The issues presented in the Initial Study Checklist have been utilized as thresholds of significance in this section. Accordingly, a project may create a significant adverse environmental impact if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (refer to Section 8.0, *Effects Found Not to be Significant*);

- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (refer to Impact Statement HAZ-1);

- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (refer to Section 8.0, *Effects Found Not to be Significant*);

- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment (refer to Section 8.0, *Effects Found Not to be Significant*);

- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working the in the project area (refer to Section 8.0, *Effects Found Not to be Significant*);

- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working the project area (refer to Section 8.0, *Effects Found Not to be Significant*);

- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (refer to Section 8.0, *Effects Found Not to be Significant*); and/or

- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands (refer to Section 8.0, *Effects Found Not to be Significant*).

Based on these standards, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

5.10.4 IMPACTS AND MITIGATION MEASURES

CONSTRUCTION-RELATED ACCIDENTAL RELEASE OF HAZARDOUS MATERIALS

HAZ-1 SHORT-TERM CONSTRUCTION ACTIVITIES WOULD NOT CREATE A SIGNIFICANT HAZARD TO THE PUBLIC OR ENVIRONMENT THROUGH ACCIDENT CONDITIONS INVOLVING THE RELEASE OF HAZARDOUS MATERIALS.

Impact Analysis: One of the means through which human exposure to hazardous substance could occur is through accidental release. Incidents that result in an accidental release of hazardous substances into the environment can cause contamination of soil, surface water, and groundwater, in addition to any toxic fumes that might be generated. Human exposure of contaminated soil or water can have potential health effects based on a variety of factors, such as the nature of the contaminant and the degree of exposure. Construction activities associated with development of the project could release hazardous materials into the environment through reasonably foreseeable upset and accident conditions.

Structural Demolition

The existing on-site residential structure was constructed prior to 1978. Thus, the potential for ACMs or lead-based paints (LBPs) exists. Demolition of this structure could expose construction personnel and the public to ACMs or LBPs. Federal and State regulations govern the renovation and demolition of structures where ACMs and LBPs are present. All demolition that could result in the release of ACMs or LBPs must be conducted according to Federal and State standards.

The National Emission Standards for Hazardous Air Pollutants (NESHAP) mandates that building owners conduct an asbestos survey to determine the presence of ACMs prior to the commencement of any remedial work, including demolition (Mitigation Measure HAZ-1). If ACM material is found, abatement of asbestos would be required prior to any demolition activities. If paint is separated from building materials (chemically or physically) during demolition of the structures, the paint waste would be required to be evaluated independently from the building material by a qualified Environmental Professional (HAZ-2). If LBP is found, abatement would be required to be completed by a qualified Lead Specialist prior to any demolition activities. Compliance with Mitigation Measures HAZ-1 and HAZ-2, as well as SCAQMD Rule 1403, would reduce potential impacts in this regard to less than significant levels.

Existing Soil Contamination

Construction activities at the project site would result in the disturbance of existing on-site soil contamination as a result of the former generating station activities. However, based on the hazardous materials investigations conducted for the project site, no hazardous materials of concern have been detected above regulatory thresholds for residential use for soils at the project site. Thus, soil disturbance activities are not anticipated to result in health and safety impacts to construction workers.

It should be noted that the 2000 Parsons Investigation concluded that residual asbestos is present in localized areas of site soils at levels that could pose an adverse threat to human health under certain types of land use. Specifically, future activities that result in significant fugitive dust exposure to an on-site receptor could cause a potential inhalation health risk. The following recommendations were included as part of this investigation:

- Entering into a voluntary cleanup agreement (VCA) with the DTSC should be considered to conclusively demonstrate that site conditions are protective of human health or to determine the scope of any mitigative measures. Determining the need for DTSC involvement should be based on the likely future use of the property and the corresponding potential for adverse human health impacts.

- Given the presence of residual asbestos in certain areas of the site, the need for importing clean fill should be considered as part of the land use planning process. The need for this should consider whether the future land use could result in significant fugitive dust exposure potential in areas with known near-surface asbestos. The amount of clean fill required to ensure protectiveness would depend upon the ultimate land use. For example, no fill would be required if the site were to be covered such that the soils were unavailable for contact (e.g., parking areas; building foundations, concrete- of asphalt-covered areas, etc.). Only a small amount of clean cover (e.g., approximately one foot) would be needed if little or no soil disturbance was likely to occur (e.g., landscaping). However, a larger amount of clean fill would likely be needed if there is a significant potential for subsurface disturbances (e.g., residential, playground, etc.).

Further, the 2001 TetraTech Investigation concluded that on-site exposures would not likely cause adverse human health effects and that the potential estimated risks associated with future residential development is acceptable. However, due to the historical presence of asbestos at the site, future construction activities may require asbestos monitoring.

Upon follow up investigations conducted in 2011 by Dudek, asbestos at the project site would not exceed thresholds for residential use. Based on the existing conditions at the project site and the proposed residential and passive/recreation uses at the site, DTSC involvement and the need for soil import is not anticipated. Further, an asbestos monitor during construction activities would not be required. Thus, asbestos in soils at the project site are anticipated to result in less than significant impacts due to the lack of asbestos sampled above regulatory thresholds.

Existing Groundwater Contamination

Construction activities could encounter groundwater during site disturbance activities. However, based on the hazardous materials investigations conducted for the project site, no hazardous materials of concern have been detected above regulatory thresholds for residential use for groundwater at the project site. Thus, disturbance activities are not anticipated to result in health and safety impacts to construction workers as a result of groundwater at the project site.

Existing Utilities

Utilities have been present within the boundaries of the project site as a result of the former generating facility. It is anticipated that these utilities were removed during demolition of the facility and remediation activities. However, some utilities may be present underground. With implementation of the recommended Mitigation Measure HAZ-3, the Applicant would be required to confirm whether or not utilities may be present on-site. Should utilities be potentially present and would need to be removed in order to construct the proposed Tentative Tract Map 17425, the Applicant would be required to remove on-site utilities in consultation with the City Engineer. Should hazardous materials be anticipated in association with utility removal, the Applicant and the City Engineer would be required to further consult with the Orange County Health Care Agency regarding proper utility removal and worker safety protective measures. Upon implementation of the recommended Mitigation Measure HAZ-3, impacts in this regard would be reduced to less than significant levels.

No major oil pipe lines pass through the City of Seal Beach. However, two small oil pipe lines are present within the existing 1st Street right-of-way. It is noted that the existing oil pipelines are located outside of the proposed Tentative Tract Map 17425 (including the proposed street vacation area). Statistically, the greatest danger to petroleum products pipe lines is an accidental dig-in due to road maintenance and utility or traffic signal systems repairs, renovations, and new construction. Implementation of the proposed project would include utility improvements within 1st Street, which could result in the rupture of these pipe lines. Protection against dig-ins is provided by Dig Alert (Underground Service Alert of Southern California). Mitigation Measure HAZ-4 would require that prior to disturbance within the 1st Street right-of-way, the contractor would be required to contact Dig Alert in order to confirm the location of existing oil pipe lines. The contractor would be required to coordinate with the owner of the oil pipe line in order to ensure that roadway disturbance activities do not result in the rupture of the existing oil pipe lines. With implementation of Mitigation Measure HAZ-4, impacts in this regard would be reduced to less than significant levels.

Transport of Hazardous Materials

Excavation and grading activities may involve the off-site transport and disposal of hazardous materials associated with the demolition of the existing on-site structure. Off-site transport and disposal of hazardous building materials would be short-term in nature, only occurring during demolition activities, and would be subject to Federal, State, and local health and safety regulations that protect public safety. Handling, transport, and disposal of these materials are regulated by the DTSC, CalEPA, CalOSHA, HCA, and OCFA. The project construction contractor would also be subject to the requirements of the CalOSHA and HCA governing removal actions. DTSC regulations require specific hazardous materials handling methods, truck haul routes, and schedules

to minimize potential exposure during hazardous materials removal actions. With adherence to the requirements of affected regulatory agencies regarding the handling, transport, and disposal of hazardous materials, the proposed project would not create a significant hazard to the public or the environment. As such, impacts related to the temporary off-site hauling and disposal of hazardous building materials during demolition would be less than significant.

Conclusion

Site disturbance/demolition activities could expose workers to a variety of potentially hazardous materials. Implementation of Mitigation Measures HAZ-1 through HAZ-4 would reduce potential impacts from site disturbance/demolition activities that would result in accidental conditions at the project site. If unknown wastes or suspect materials are discovered during construction by the contractor, which he/she believes may involve hazardous wastes/materials, the contractor would be required to complete the following (Mitigation Measure HAZ-5):

- Immediately stop work in the vicinity of the suspected contaminant, removing workers and the public from the area;
- Notify the City Engineer of the City of Seal Beach;
- Secure the areas as directed by the City Engineer; and
- Notify the Orange County Health Care Agency's Hazardous Waste/Materials Coordinator.

Further, implementation of the proposed project would require the import of fill materials, which could include contaminated soils. With implementation of the recommended Mitigation Measure HAZ-6, the contractor, in consultation with a Phase II/Site Characterization Specialist, would be required to verify that all imported fill materials and on-site materials that are used for fill, do not include hazardous substances above regulatory thresholds.

With implementation of Mitigation Measures HAZ-1 through HAZ-6 and compliance with applicable Federal, State, and local regulatory requirements pertaining to hazardous materials, potential impacts would be reduced to less than significant levels.

Mitigation Measures:

HAZ-1 Prior to demolition activities, an asbestos survey shall be conducted by an Asbestos Hazard Emergency Response Act (AHERA) and Cal OSHA certified building inspector to determine the presence or absence of asbestos containing-materials (ACMs). If ACMs are located, abatement of asbestos shall be completed prior to any activities that would disturb ACMs or create an airborne asbestos hazard. Asbestos removal shall be performed by a State certified asbestos containment contractor in accordance with the South Coast Air Quality Management District (SCAQMD) Rule 1403.

HAZ-2 If paint is separated from building materials (chemically or physically) during demolition of the structures, the paint waste shall be evaluated independently from the building material by a qualified Environmental Professional. If lead-based paint is found, abatement shall be completed by a qualified Lead Specialist prior to any activities that would create lead dust or fume hazard. Lead-based paint removal and disposal shall be performed in accordance with California Code of Regulation Title 8, Section 1532.1, which specifies exposure limits, exposure monitoring and respiratory protection, and

mandates good worker practices by workers exposed to lead. Contractors performing lead-based paint removal shall provide evidence of abatement activities to the City Engineer.

HAZ-3 The Applicant shall confirm whether or not utilities are present on-site. Should utilities be present and would need to be removed, the Applicant shall remove on-site utilities in consultation with the City Engineer. Should hazardous materials be anticipated in association with utility removal, the Applicant and the City Engineer shall further consult with the Orange County Health Care Agency regarding proper utility removal and worker safety protections.

HAZ-4 Prior to site disturbance within the 1st Street right-of-way, the contractor shall contact Dig Alert (Underground Service Alert of Southern California) in order to confirm the location of the existing oil pipe lines. The contractor shall coordinate with the owner(s) of the existing oil pipe lines in order to ensure that a rupture during disturbance activities does not occur.

HAZ-5 If unknown wastes or suspect materials are discovered during construction by the contractor that are believed to involve hazardous waste or materials, the contractor shall comply with the following:

- Immediately cease work in the vicinity of the suspected contaminant, and remove workers and the public from the area;
- Notify the City Engineer of the City of Seal Beach;
- Secure the area as directed by the City Engineer; and
- Notify the Orange County Health Care Agency's Hazardous Materials Division's Hazardous Waste/Materials Coordinator (or other appropriate agency specified by the City Engineer). The Hazardous Waste/Materials Coordinator shall advise the responsible party of further actions that shall be taken, if required.

HAZ-6 The contractor shall verify that all imported soils, and on-site soils proposed for fill, are not contaminated with hazardous materials above regulatory thresholds in consultation with a Phase II/Site Characterization Specialist. If soils are determined to be contaminated above regulatory thresholds, these soils shall not be used as fill material within the boundaries of the project site, unless otherwise specified by a regulatory agency that has jurisdiction to oversee hazardous substance cleanup (e.g., Department of Toxic Substances Control, Regional Water Quality Control Board, Orange County Health Care Agency, etc.).

Level of Significance: Less Than Significant With Mitigation Incorporated.

5.10.5 CUMULATIVE IMPACTS

- **THE PROPOSED PROJECT, IN COMBINATION WITH OTHER CUMULATIVE PROJECTS, WOULD NOT INCREASE THE EXPOSURE OF HAZARDOUS SUBSTANCES TO THE PUBLIC OR THE ENVIRONMENT.**

Impact Analysis: Cumulative projects are not anticipated to result in a cumulatively considerable hazardous materials impact, as other projects propose recreation, mixed use (residential, retail, hotel, restaurant, theater, and a marine/science learning center), as well as a grocery store use (Fresh 'n Easy). The project could contribute, cumulatively (although not significantly), to a hazard involving the transport of hazardous materials during construction. Other cumulative projects could result in the transport of hazardous materials during site disturbance/demolition/remedial activities. Handling, transport, and disposal of these materials are regulated by the DTSC, CalEPA, CalOSHA, HCA, and OCFA. The construction contractor, on a project-by-project basis, would be subject to the requirements of the DTSC governing removal actions. DTSC regulations require specific hazardous materials handling methods, truck haul routes, and schedules to minimize potential exposure during hazardous materials removal actions. Compliance with all applicable Federal and State laws related to the transportation of hazardous materials would reduce the likelihood and severity of accidents during transit, thereby ensuring that a less than significant cumulatively considerable impact would occur as a result of implementation of the proposed project.

Mitigation Measures: Refer to Mitigation Measures HAZ-1 through HAZ-6.

Level of Significance: Less Than Significant With Mitigation Incorporated.

5.10.6 SIGNIFICANT UNAVOIDABLE IMPACTS

No significant impacts related to Hazards and Hazardous Materials have been identified following implementation of the recommended Mitigation Measures HAZ-1 through HAZ-5 and compliance with the applicable Federal, State, and local regulatory requirements.

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